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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,582

03/20/2007

Ikuo Kawamoto

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7590

03/09/2009

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

NGUYEN, LAUREN

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,582	Applicant(s) KAWAMOTO ET AL.	
	Examiner LAUREN NGUYEN	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/05/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-18 is/are pending in the application.
- 4a) Of the above claim(s) 6-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/05/2009 has been entered.

Response to Amendment

2. Applicant's arguments filed on 02/05/2009 have been fully considered but they are not persuasive.

3. The applicant argues (see page 3) regarding the amended **claim 1** that Tashiro does not disclose the subject matter of claim 1. The examiner respectfully disagrees. **Kawata et al.** discloses the claimed invention except for the angle α and the retardations of the first and second birefringent layers. **Tashiro et al.** (in at least paragraphs 0253-0259, figures 26-28) teaches a slow axis of the first birefringent layer is defined at one angle of $+23^\circ$ to $+24^\circ$ and -23° to -24° ($0-25^\circ$) with respect to an absorption axis of the polarizer, and wherein in-plane retardation of the first birefringent layer is 220 nm to 270 nm and in-plane retardation of the second birefringent layer is 100 to 140 nm (see at least paragraph 0254). In addition, **Tashiro et al.** teaches human eyes react to green light, especially light around 550 nm. For this reason, it is desirable that the retardation of the $\lambda/2$ plate is $550\text{ nm}/2=275\text{ nm}$, and the retardation of the $\lambda/4$ plate is $550\text{ nm}/4=137.5\text{ nm}$ (see at least paragraph 0195). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the angle α and the retardations as taught by **Tashiro et al.** because such modification would improve the display characteristics.

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In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wavelength since such modification would allow the color in the lambda ranges near 550 nm and 590 nm to behave in a consistent manner.

4. The claim language therefore does not patentably distinguish over the applied reference[s], and the previous rejections are maintained.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3, 5, and 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kawata et al. (US 2004/0004688) in view of **Tashiro et al. (US 2004/0257506)**.

7. Regarding **claim 1**, **Kawata et al.** (figures 1-2) discloses an elliptically polarizing plate comprising a polarizer (see at least paragraph 0388, lines 3-8), a protective layer formed on one side of the polarizer (the alignment layer, see at least paragraphs 0047 and 0049), a first birefringent layer serving as a $\lambda/2$ plate, and a second birefringent layer serving as a $\lambda/4$ plate in the order given, wherein the first birefringent layer and the second birefringent layer are each formed by using a liquid crystal material (see at least paragraphs 0041 and 0047).

8. However, **Kawata et al.** does not disclose the remaining limitations of **claim 1**. **Tashiro et al.** (in at least paragraphs 0253-0259, figures 26-28) teaches a slow axis of the first birefringent layer is defined at one angle of $+23^\circ$ to $+24^\circ$ and -23° to -24° ($0-25^\circ$) with respect to an absorption axis of the polarizer, and wherein in-plane retardation of the first birefringent layer is 220 nm to

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270 nm and in-plane retardation of the second birefringent layer is 100 to 140 nm (see at least paragraph 0254). In addition, **Tashiro et al.** teaches human eyes react to green light, especially light around 550 nm. For this reason, it is desirable that the retardation of the $\lambda/2$ plate is $550 \text{ nm}/2=275 \text{ nm}$, and the retardation of the $\lambda/4$ plate is $550 \text{ nm}/4=137.5 \text{ nm}$ (see at least paragraph 0195). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the angle alpha and the retardations as taught by **Tashiro et al.** because such modification would improve the display characteristics. In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wavelength since such modification would allow the color in the lambda ranges near 550 nm and 590 nm to behave in a consistent manner.

9. In addition, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP § 2144.05.

10. Regarding **claims 2-3**, **Kawata et al.** discloses the limitations as shown in the rejection of **claim 1** above. However, **Kawata et al.** does not disclose the first birefringent layer has a thickness of 0.5 to 5 μm and the second birefringent layer has a thickness of 0.3 to 3 μm . **Kawata et al.** (in at paragraphs 0049-0050) teaches the first birefringent layer has a thickness of 0.5 to 5 μm and the second birefringent layer has a thickness of 0.3 to 3 μm (0.05 to 1 μm). It would have been obvious to one having ordinary skill in the art at the time the

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invention was made to modify the thickness of the birefringent layers, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. In addition, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2131.05.

11. Regarding **claim 5, Tashiro et al.** (in at least paragraphs 0253-0259, figures 26-28) implicitly discloses the absorption axis of the polarizer and a slow axis of the second birefringent layer are substantially perpendicular to each other (Tashiro et al. implicitly teaches the angle $\beta = 2 \times \alpha + 45$, see at least paragraph 0256, that is, for example, $2 \times 22.5 + 45 = 90$ degrees or $2 \times 20 + 45 = 85$ degrees). In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2131.05.

12. Regarding **claim 16, Kawata et al.** (figures 1-2) discloses an image display apparatus comprising the elliptically polarizing plate according to claim 1 (see at least paragraph 0001).

13. Regarding **claims 17-18, Tashiro et al.** (figures 26-28) implicitly discloses an in-plane retardation of the first and second birefringent layers at a wavelength of 590 nm is 220 to 305 nm and 90-180 nm, respectively (see at least paragraph 0254, **Tashiro et al.** clearly teaches that the retardation values of the half wave plate and the quarter wave plate are about $\lambda/2$ and $\lambda/4$ of the visible wavelength, respectively).

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14. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. In addition, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2131.05.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lauren Nguyen whose telephone number is (571) 270-1428. The examiner can normally be reached on M-Th, 7:30-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/L. N./

Examiner, Art Unit 2871

/Andrew Schechter/

Primary Examiner, Art Unit 2871